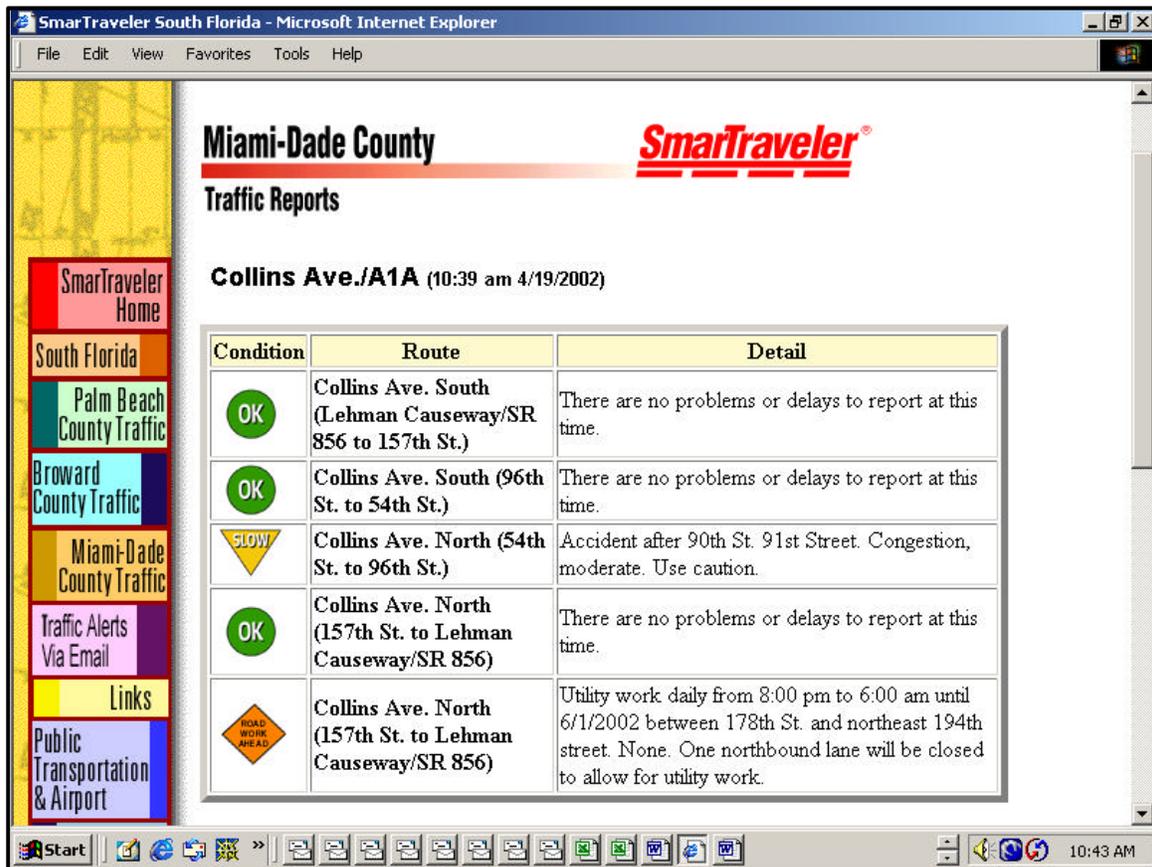


# Miami Regional Advanced Traveler Information System Project:

## Final Evaluation Report



The screenshot shows a Microsoft Internet Explorer browser window displaying the SmarTraveler South Florida website. The page title is "Miami-Dade County Traffic Reports". The main heading is "Collins Ave./A1A (10:39 am 4/19/2002)". Below this is a table with three columns: Condition, Route, and Detail. The table lists five traffic reports for various segments of Collins Ave. South and North. The first four reports are marked "OK", indicating no problems or delays. The fifth report is marked "SLOW" and describes utility work on Collins Ave. North between 178th St. and northeast 194th street, with one northbound lane closed.

Condition	Route	Detail
OK	Collins Ave. South (Lehman Causeway/SR 856 to 157th St.)	There are no problems or delays to report at this time.
OK	Collins Ave. South (96th St. to 54th St.)	There are no problems or delays to report at this time.
SLOW	Collins Ave. North (54th St. to 96th St.)	Accident after 90th St. 91st Street. Congestion, moderate. Use caution.
OK	Collins Ave. North (157th St. to Lehman Causeway/SR 856)	There are no problems or delays to report at this time.
ROAD WORK AHEAD	Collins Ave. North (157th St. to Lehman Causeway/SR 856)	Utility work daily from 8:00 pm to 6:00 am until 6/1/2002 between 178th St. and northeast 194th street. None. One northbound lane will be closed to allow for utility work.

**Submitted To:**  
**Federal Highway Administration – ITS Joint Program Office**  
**Florida Department of Transportation**

**Submitted By:**  
**Science Applications International Corporation**

**April 2002**

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## Executive Summary

### Background

The Miami-Dade, Broward, and Palm Beach Counties form a single urban region consisting of the metropolitan area of Miami and the cities of Ft. Lauderdale, Hialeah, and Palm Beach. Over the past several years, inter-county and intra-county travel within this area has steadily increased. Traffic volumes on many roads exceed current capacity, resulting in congestion delays, incidents, and air pollution. According to the Texas Transportation Institute, travel times during

peak periods in the Miami region are approximately 34 percent higher than during non-peak conditions.



To address the growing problems of congestion and incidents, the Florida Department of Transportation (FDOT) implemented a regional Intelligent Transportation System (ITS) program in the Miami tri-county region. The project, Southeast Florida Intelligent Corridor System (ICS), was initiated in the early nineties as a demonstration project. In order to increase the appeal of the program, the Southeast Florida ICS was later re-named SunGuide. In 1998, the Federal Highway

Administration (FHWA) endorsed the SunGuide program for the tri-county region to serve as an umbrella to facilitate integration of transportation/ITS infrastructure and services to help address congestion management. The SunGuide program selected Advanced Traveler Information Systems (ATIS) as the most effective integration, implementation, and congestion mitigation tool under its current situation.

A Memorandum of Understanding (MOU) to support the project was negotiated by the stakeholder agencies and signed in August 1999. The MOU terms designated the Florida DOT District VI (located in Miami) as the lead agency for the project, responsible for providing the contractual support and project management. Florida DOT Districts VI, VIII (Turnpike District), and IV, and the Miami Dade Expressway Authority agreed to provide matching funds and resource sharing. The metropolitan planning organizations (MPOs) for the three counties located in the region (Miami-Dade, Broward, and Palm Beach) and Tri-County Commuter Rails (Tri-Rail) agreed to provide information and other support to the project. All referenced agencies are signatories to the MOU, and are collectively designated as “PARTNERS.”

The PARTNERS determined that establishing a public-private partnership would be the most cost-effective and efficient means to obtain ATIS services, as these services could be obtained and deployed within an 18-month time frame. It was determined that using a more conventional approach, such as acquiring public funding with the selection of a contractor through a bid process, would have taken longer. A procurement method permitted under Florida procurement laws known as Invitation to Negotiate (ITN) was selected to obtain the services of a private partner. The ITN process may be used when the scope of work for a project cannot be accurately and completely defined by the agency, which occurs most often for acquisitions of rapidly

changing technology, outsourcing, or complex services. Under the ITN method, a statement of work (SOW) is issued and vendors submit responses. The State then negotiates a final SOW and selects a vendor. The ITN process offered the most flexibility for evaluating alternative business models and technical approaches for ATIS deployment, and also would enable FDOT to meet the goals established for a public-private partnership.

Three responses to the ITN were received, and the State negotiated simultaneously with each respondent. Based on the results of the negotiations, SmartRoute Systems (SRS) was selected in March 2000 as the information service provider (ISP) in support of the project. The signed contract agreement specified a 5-year period of performance.

Under the negotiated contract terms, FDOT anticipated providing management support and direction on behalf of the PARTNERS. A Steering Committee was established to oversee the project, and SRS agreed to implement the ATIS services, including marketing and outreach. The PARTNERS agreed to provide the service provider with access to and information from their ITS infrastructure in support of the project, and encouraged SRS to develop new business areas and revenue sources to support the ATIS. SRS also agreed to install additional ITS infrastructure in support of the project (30 cameras). The PARTNERS provided 3 years of seed funding (approximately \$1.5 million per year), and SRS agreed to the 5-year period of performance with the expectation that the service would be self-sufficient by the end of the third year. The business model proposed by SRS was predicated on developing two primary business areas to ensure achievement of self-sufficiency by the end of year three of the contract: Internet based advertising, and customized information services.

SRS' scope of work included ATIS-related data collection, fusion, and dissemination. SRS was to provide the following free services to disseminate traveler information:

- Website
- E-mail notification to subscribed users
- Twice daily faxes to subscribed users
- Telephone access with a menu tree system
- Cable TV

SRS was also responsible for marketing and outreach, record keeping, system deployment, operation, and maintenance, evaluation support, and management and coordination.

## **Evaluation Methodology**

The evaluation was developed as a case study providing a qualitative assessment of the project. The main study areas identified for the evaluation were the public-private partnership, the procurement process, and the business model. The following three goals were identified to support these study areas:

- **Goal #1: Enhance the understanding of the process to develop and maintain a public/private partnership.** What did and did not work well, what are the lessons learned, what is relevant for other jurisdictions considering a similar implementation approach?
- **Goal #2: Enhance the understanding of using the Invitation to Negotiate (ITN) process in choosing the Information Service Provider (ISP).** How well did the Invitation to Negotiate procurement process work, what are the lessons learned, is the ITN process a useful approach to procuring ITS services?
- **Goal #3: Examine the ATIS business model.** Is the business model proposed by SRS viable over the long term?

Data collection was conducted through stakeholder interviews (both before and after), a review of project related documents (monthly reports, procurement documents, etc.), and an after survey of stakeholders.

### **Implementation Results**

SunGuide ATIS services were begun in April 2001. To date, the web-based and telephone services have been implemented and are accessible at [www.smartraveler.com](http://www.smartraveler.com) and 305-914-3838 (Miami-Dade County) and 866-914-3838 (Broward and Palm beach Counties). The e-mail service was implemented on March 8, 2002. The fax service and cable TV services have not yet been implemented, as is described below:

- Sending faxes appears to be redundant to providing e-mail services, and is not as efficient or as cost effective as an information dissemination service as is e-mail. However, the contract does not contain any process by which a service can be discontinued. The only option, apparently, is to negotiate an addendum to the contract. SRS has proposed that this service be implemented as a premium, for-fee service rather than as a free service as initially negotiated.
- The cable TV service proved to be unprofitable when implemented in SRS' Boston and Washington, DC markets. SRS has recommended against implementing an unprofitable service that has both high start-up costs and would compete with other SRS services.

The key implementation result, however, was a finding by SRS that the business model initially proposed for the project was not viable. SRS has submitted a proposal to the PARTNERS for a fee-for-service business model and has indicated that absent such a change, SRS will not continue as the service provider beyond the 5-year contract period.

**Evaluation Findings**

The findings for the evaluation are compared with the three goals established for the evaluation. The left column presents the objectives developed in support of each evaluation goal. The right column presents the actual implementation experience of the project as measured against the objectives.

**Table ES-1. Comparison of Evaluation Goal #1 - Enhance the understanding of the process to develop and maintain a public/private partnership and SunGuide Implementation Experience**

Goal #1	Miami Regional ATIS Project (SunGuide) Implementation Experience
To use the public/private partnering method to provide an ATIS service in a timely and cost-effective manner that will benefit travelers and the agencies involved.	The project has succeeded in meeting this goal. The PARTNERS have stated that the quality of traveler information being provided by SRS is accurate and timely, and is providing a benefit to end users.
To overcome institutional issues involved in establishing a public/private partnership.	<p>The changes in project management have helped both public and private partners make great strides in overcoming and resolving institutional issues involved with operations.</p> <p>The issues related to the inadequate specificity contained in the contract document have not yet been resolved.</p>

**Table ES-2. Comparison of Evaluation Goal #2 - Enhance the understanding of using the Invitation to Negotiate (ITN) process in choosing the Information Service Provider (ISP) and SunGuide Implementation Experience**

Goal #2	Miami Regional ATIS Project (SunGuide) Implementation Experience
To use the Invitation to Negotiate (ITN) to successfully procure an ITS project.	This goal has been achieved. The success of this approach is reflected by the fact that FDOT plans on using this process for future ITS procurements.
To use the negotiation process to better refine the scope of services.	This goal has been achieved. The final scope of services negotiated for the project includes proposed service delivery systems incorporated from each bid submitted.
To use the negotiation process to obtain the best possible arrangement with the private sector ISP for the traveling public and the public partners.	<p>From the public sector perspective, this goal has been achieved. The ISP selected for the project had not proposed cable television services. However, the two unsuccessful bidders had proposed this service, and FDOT negotiated this service into the final scope of service agreement.</p> <p>The ISP, however, has indicated that certain concessions made have had a negative impact on the business model.</p>

**Table ES-3. Comparison of Evaluation Goal #3 - Examine the ATIS business model and SunGuide Implementation Experience**

<b>Goal #3</b>	<b>Miami Regional ATIS Project (SunGuide) Implementation Experience</b>
To develop an ATIS business model that will likely lead to self-sustainability within the next 3 years.	This goal will in all likelihood not be met. SRS has already indicated that achieving this goal is not probable. SRS has further indicated that the company will not continue to provide ATIS services beyond the 5-year contract period using the current business model. SRS has already proposed a shift to a fee-for-service business model.
To develop a successful ATIS.	<p>From a technical viewpoint, the project has been successful. The SunGuide system is an operational system that is being used by travelers and commuters.</p> <p>From a business viewpoint, the project has not been successful. The project has demonstrated that providing self-sufficient ATIS services is problematic. The market for customized information services does not appear strong, and Internet based advertising as a source of revenues has never developed as anticipated.</p>

The Miami Regional ATIS Project was a well-planned, well-conceived project that attempted to address many issues facing earlier public-private partnership projects. One example includes the use of the ITN procurement process to provide needed flexibility and establish a framework for the private partner to develop additional business areas and revenue sources. Both the public and private partners, in a survey and in follow-up interviews, stated the view that the information being provided is accurate and timely, and is well received by end-users.

The project, however, appears to have encountered the same problem that similar efforts have experienced elsewhere in the country: ATIS does not appear to be a business area capable of generating a self-sustaining stream of revenues. While the quality of services being provided by SRS is good, and the ATIS is meeting traveler and user needs, the business model proposed for the project does not appear viable.

## **1.0 Introduction**

In 1999, the U.S. Congress earmarked funds for selected projects that were assessed as supporting the improvements of transportation efficiency, promoting safety, increasing traffic flow, reducing emissions, improving traveler information, enhancing alternative transportation modes, building on existing intelligent transportation systems (ITS), and promoting tourism. A small number of these projects have been selected for evaluation under the Federal Highway Administration’s (FHWA) Joint Program Office’s (JPO) national ITS evaluation program. The Advanced Traveler Information System for Miami-Dade, Broward and Palm Beach Counties (tri-county area) was among the selected projects.

Science Applications International Corporation, under direction from the FHWA JPO, was selected in January 2000 to develop and implement an evaluation of the project. The evaluation was conducted as a case study/lessons learned evaluation intended to provide qualitative information to assist other jurisdictions considering similar deployments. This document presents the final report for the Miami Regional ATIS.

### **1.1 Background**

The Miami-Dade, Broward, and Palm Beach Counties form a single urban region consisting of the metropolitan area of Miami and the cities of Ft. Lauderdale, Hialeah, and Palm Beach. Over the past several years, inter-county and intra-county travel within this area has steadily increased. Traffic volumes on many roads exceed current capacity, resulting in congestion delays,



incidents, and air pollution. According to the Texas Transportation Institute, travel times during peak periods in the Miami region are approximately 34 percent higher than during non-peak conditions. TTI consistently ranks the Miami region as one of the most congested cities in the nation, with estimated 1994 congestion-related economic costs of \$1.1 billion.<sup>1</sup>

To address the growing problems of congestion and incident management, the Florida Department of Transportation (FDOT) implemented a regional ITS program in the

Miami tri-county region. The project, Southeast Florida Intelligent Corridor System (ICS), was initiated in the early nineties as a demonstration project. In order to increase the appeal of the program, the Southeast Florida ICS was later re-named SunGuide. In 1998, FHWA endorsed the SunGuide program for the tri-county region to serve as an umbrella to facilitate integration of transportation/ITS infrastructure and services to help address the congestion management. The

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<sup>1</sup>Kumbhojkar, Arvind. “A Regional Public-Private Partnership for Traveler Information in Broward, Miami-Dade, and Palm Beach Counties,” pages 1-3. FDOT, 1998.

SunGuide program targeted Advanced Traveler Information Systems (ATIS) as the most effective integration implementation and congestion mitigation tool under its current situation.

FDOT recognized, however, that providing regional, multi-modal traveler information required the successful integration of the various county and State legacy systems as well as the deployment of supporting ITS infrastructure components. FDOT also recognized that obtaining, developing and deploying ATIS and supporting ITS infrastructure using only public expertise and funding would be a lengthy process. Given these constraints, FDOT determined that the most efficient way to expedite the deployment of the regional ATIS would be to use a public-private partnering approach drawing upon private sector funding and experience, with some public funding provided as seed money for the project. The intent of using this approach was to select a private partner who would be able to provide ATIS services, supplement the ITS infrastructure being deployed by the State, and, over time, develop a self-sustaining ATIS business model. Particular benefits that FDOT sought in selecting a public/private partnering approach to deploy ATIS services included:

- Quick results – deployment of service in 12-18 months, a significantly shorter time period than relying on public agencies alone to deploy services.
- Availability of initial capital – sharing costs between the public and private sectors should reduce required up-front public sector funding as well as deployment costs.
- Obtaining operations and maintenance expertise – the private partner would be expected to maintain and operate the ATIS system, thus alleviating the public sector need to obtain person power and necessary expertise.
- Revenue generating – a private partner may be able to develop its own salable information package using raw data in the public domain to off-set capital and operating costs. Florida law prohibits the generation of revenues from publicly funded projects, but a public-private partnership may be able to satisfy legal requirements and generate revenues for the private partner.

FDOT further recognized that the ATIS project would be a regional initiative involving multiple public sector agencies, and that a Memorandum of Understanding (MOU) would be needed to ensure that all necessary partners supported and participated in the project. A MOU in support of the project was negotiated by the stakeholder agencies and signed in August 1999. Under the terms of the MOU, Florida DOT District VI (located in Miami) was designated as the lead agency for the project, responsible for providing the contractual support and project management. Florida DOT Districts VI, VIII (Turnpike District), and IV, and the Miami Dade Expressway Authority agreed to provide matching funds and resource sharing. The metropolitan planning organizations for the three counties located in the region (Miami-Dade, Broward, and Palm Beach) and Tri-County Commuter Rails (Tri-Rail) agreed to provide information and other support to the project. All referenced agencies are signatories to the MOU, and are collectively designated PARTNERS.

## **1.2 Procurement Process: Invitation to Negotiate**

Once FDOT had determined that the most effective means for implementing the ATIS project would be a public-private partnership vehicle, and the MOU had been signed, the next step in project planning was to identify how vendor (private partner) services would be obtained. The State of Florida's Contractual Services Office established the following three formal procurement methods for the acquisition of commodities and services:

- Invitation to Bid (ITB) – used when the purchaser knows exactly what is required for the scope of work (SOW).
- Request for Proposal (RFP) - used when the purchaser has a general idea of what is required for the SOW, but cannot develop the entire special conditions and specifications that could be used in an ITB.
- Invitation to Negotiate (ITN) – used when an ITB or an RFP will not provide appropriate mechanisms to purchase the needed commodities or services.

The ITN method may be used when one or more of the following criteria are met:

1. The SOW cannot be accurately and completely defined by the agency. This often occurs for acquisitions of rapidly changing technology, outsourcing, or complex services.
2. Commodities or services can be provided in several different ways, any of which would be acceptable. This often occurs for acquisitions of rapidly changing technology or complex services.
3. Contractor qualifications and the quality of commodities or services to be delivered may be considered more important than the contract price.
4. The responses may contain innovative solutions that differ from what the agency may have requested and this process allows for these to be considered.
5. The responses may contain a different level of commodities and services than that requested, requiring a negotiation to reduce price or services to match the available contract funds or increase price to meet a higher level.

FDOT determined that the ITN would be the most effective procurement process to use to support the ATIS project. The ITN process offered the most flexibility for evaluating alternative business models and technical approaches for ATIS deployment, and also would enable FDOT to meet the goals established for a public-private partnership. The ITN process was approved by the PARTNERS, and an Invitation to Negotiate was developed and issued on June 24, 1998.

The ITN established the criteria that respondents needed to meet with respect to the following elements:

- Proposed Scope of Services – establishing minimum service requirements and coverage, data and information collection, data fusion and dissemination, marketing and outreach, and record keeping requirements.
- Technical proposal - technical deployment plan, operations and maintenance plan, business plan, management plan, legal conformance with Florida State Statutes on Public Records Chapter 119 (public records), and qualifications.
- Cost proposal – initial deployment, system operation, marketing and public outreach, and estimated revenue earning and sharing percentages.

Three vendor teams responded to the ITN and simultaneous negotiations were conducted with each team. Based on the results of the negotiations, SmartRoute Systems (SRS) was selected in March 2000 as the information service provider (ISP) in support of the project. The signed contract agreement specified a period of performance of five years.

### **1.3 Negotiated Scope of Services**

#### **1.3.1 Information Service Provider**

The final scope of services negotiated for the Miami Regional ATIS project specified that “the information service provider (ISP) shall give priority to surface transportation mode facilities while providing real-time traveler and traffic information”. Eight categories were identified for the services to be provided by the ISP:

1. Data and information collection.

FDOT and the other PARTNER agencies agreed to make resources (access to ITS infrastructure) and data available to the ISP. The scope of services encouraged the ISP to obtain data from other sources and to deploy additional elements or data collection systems in coverage areas lacking supporting infrastructure. The scope of services also specified the freeways, toll roads and other priority roads to be included in the ATIS coverage by route segment and county.

2. Data fusion and developing advisories.

The ISP was required to establish facilities and mechanisms for receiving, compiling and efficiently disseminating traveler information on a real-time basis.

3. Information dissemination.

The ISP was to provide the following free services to disseminate traveler information:

- Website
- E-mail notification to subscribed users
- Twice daily faxes to subscribed users

- Telephone access with a menu tree system
- Cable TV

The basic information provided was to be oriented towards automobile and transit travel. The automobile advisories were to include information on roadway segment(s) and destination-specific traffic diversions; weather and road conditions; and, congestion levels and delays, including construction activities, lane closures, fire and medical emergencies, etc. Travel advisories also could include congestion impacts on travel times, alternate routes and modes, parking availability and locations of park-and-ride lots, intermodal transfers and transfer points, tolls, and other relevant information.

The transit information was to include arrival and departure times, routes and fares, schedule delays, transit station and bus stop locations, transfers and transfer points, shuttle rides, parking information, and other relevant information. All advisories were required to be delivered in English and Spanish.

The system was to be available to provide this information on a real-time basis 24 hours a day, 7 days a week.

#### 4. Marketing and outreach activities.

Public outreach activities were intended to include the following:

- Demonstrate the benefits of timely, accurate traveler information, thereby encouraging multi-modal travel and facilitating demand management.
- Present positive, concrete examples of ITS benefits to the public and decision makers.
- Enhance communication among the PARTNERS and increasing cooperation.
- Demonstrate the regional benefits of working under the SunGuide program to other transportation agencies.
- Develop a customer base for services.

Marketing activities were intended to generate commercial revenues. The ISP was encouraged to establish business relationships with news agencies and retailers with an interest in traveler information. The ISP was also encouraged to identify opportunities to generate advertising revenues or provide customized information services.

The scope of services also included a schedule for sharing of revenues:

- 10% of the first \$800,000 of gross revenues would be shared with the PARTNERS
- 20% of gross revenues above \$800,000 and up to \$1,200,000
- 30% of gross revenues above \$1,200,000 and up to \$1,600,000
- 40% of gross revenues above \$1,600,000.

5. Record keeping and documentation.

The ISP was assigned responsibility for all project-related record keeping and documentation. The documents and records were to include such items as technical and non-technical system specifications, deployment plans, software, day-to-day operations and maintenance activities, business and partnership agreements, minutes of meetings, and any project-related cost analyses. The documents and records could be maintained electronically.

6. Evaluation support.

The scope of services specified that the PARTNERS would evaluate the performance of the ISP on an ongoing basis. A rigorous and more thorough evaluation would be performed at the end of each 12-month period from the date of contract execution. The annual evaluation would examine such criteria as user satisfaction, number of users, ability to save time, quality of information, and cost-benefit analysis.

7. System deployment, operations, and maintenance.

The ISP was assigned responsibility for deployment, decommissioning, operations, and maintenance. This included providing staff and equipment, hardware and software, and all other considerations required for delivering intended services.

8. Management and coordination.

Project management and coordination were assigned as a responsibility of the ISP. This included activity reporting including all marketing and public outreach as well as organizing a monthly meeting with the PARTNERS to provide a status report on the project.

The scope of services also specified that any additional service requested of the ISP that was outside of the negotiated scope would be considered a supplement to the contract.

### 1.3.2 PARTNERS

The scope of services also included a section describing the responsibilities of the PARTNERS:

1. Provide resources to the ISP as appropriate for the agreed upon deliverables.
2. Operate and maintain their ITS systems and provide the ISP needed output for the proposed service at no additional cost.
3. Make available to the ISP other relevant data and information systems needed for the proposed service at no additional cost.

4. Provide access to public right-of-way structures (for the installation of ITS infrastructure), subject to the provision that the ISP follow FDOT design and construction requirements and all comply with all applicable zoning, permitting and other local requirements.
5. Share with the ISP knowledge about local conditions relevant to providing the proposed service.
6. Provide full and open communication with the ISP.
7. Monitor the progress of the service and performance of the ISP and take appropriate action they deem fit.

#### **1.4 Concept of Operations**

The project was intended to function as a public-private partnership. FDOT anticipated providing management support and direction on behalf of the PARTNERS, with SRS taking responsibility for implementing all services as the ISP. As noted in the previous section, the PARTNERS agreed to provide the ISP with access to and information from their ITS infrastructure in support of the project, and encouraged SRS to develop new business areas and revenue sources to support the ATIS. SRS also agreed to install additional ITS infrastructure in support of the project (30 video cameras).

FDOT and the PARTNERS provided 3 years of seed funding (approximately \$1.5 million per year), and SRS agreed to a 5-year period of performance with the expectation that the service would be self-sufficient by the end of the third year. The PARTNERS formed a Steering Committee to oversee the project. FDOT District VI was assigned project management responsibilities for the public sector.

The business model proposed by SRS was predicated on developing two primary business areas to ensure achievement of self-sufficiency by the end of the third year of the contract:

- Internet based advertising
- Customized information services

The expectation was that these two business areas offered substantial potential in the Miami area. The ports in Miami and Fort Lauderdale and the accompanying commercial vehicle traffic appeared to be ready markets for customized information (CVO Traveler Information). In addition, the Miami region has experienced rapid population growth and represented a large potential market for Internet services.

## **2.0 Evaluation Methodology**

The Miami Regional ATIS Project was selected by FHWA's ITS Program Assessment Working Group (PAWG) to be a case study/lessons learned evaluation. The purpose of the evaluation was to provide qualitative information on:

- How the public/private partnership was established, in particular how roles and responsibilities were defined and codified in the contract.
- Unique management strategies implemented to balance public and private sector needs, in particular the strategies used to address the needs of multiple public agencies.
- The procurement process used by the public sector to recruit a private partner.
- How the cost allocations between the public and private sectors were established and agreed to, in particular, the length of time in which a public subsidy would be provided.
- The self-sustainability of the business model used to support the project.
- The process used to identify and resolve issues.

### **2.1 Development of Evaluation Goals and Objectives**

Three evaluation goals and supporting objectives were developed by the evaluation to support the direction established by the PAWG for the case study/lessons learned evaluation:

**Goal #1: Enhance the understanding of the process to develop and maintain a public-private-partnership.**

**Objectives:**

- To document the process of and lessons learned from bringing together public partners for a multi-agency, regional ITS project.
- To document the institutional issues involved in forming a public/private partnership during the development of the ATIS project.
- To define the perceived benefits of the ATIS program to the participating agencies.
- To document the lessons learned from the private sector in forming a public-private partnership.

**Goal #2: Enhance the understanding of using the Invitation to Negotiate (ITN) process in choosing the Information Service Provider (ISP).**

**Objectives:**

- To describe the use of the ITN process in selecting a private partner for developing an ATIS.
- To examine the potential for using the ITN in procuring services for ITS projects.
- To document the lessons learned by the public sector and private sector partners during the negotiation process.

**Goal #3: Examine the ATIS business model.**

**Objectives:**

- To describe the business model used for the tri-county ATIS project.
- To document lessons learned from the private sector about the business model.
- To examine the potential for the proposed business model to be successful.
- To examine the potential for revenue generation and profitability.

Once the evaluation team had established these goals and objectives, a set of hypotheses, evaluation criteria, and information sources and requirements were developed. The hypotheses were developed as expected outcomes, both direct and indirect, from the ATIS deployment that could be tested to determine how effectively the project met the stated goals and objectives. The evaluation criteria represent the qualitative variables that were used to test the hypotheses. The information sources and requirements represent the types and sources of data collected to measure how well a hypothesis is borne out by the measures of effectiveness.

The hypotheses, evaluation criteria, and information sources and requirements developed in support of each evaluation goal are presented in Tables 2-1 through 2-3.

**Table 2-1. Goals, Hypothesis, Evaluation Criteria, and Information Sources to Enhance the Understanding of the Public/Private Partnership**

Objectives	Hypothesis	Evaluation Criteria	Information Sources or Requirements
<p>To use the public/private partnering method to provide an ATIS service in a timely and cost-effective manner that will benefit travelers and the agencies involved.</p>	<p>Through public-private partnering, ATIS will be provided to the Miami region in a cost-effective manner.</p>	<p>A technically sound, comprehensive ATIS service was provided to Miami area travelers on budget and on time.</p> <p>The deployment proceeded in a timely fashion.</p>	<p>Interviews with the partners concerning the benefits/ drawbacks of the public-private partnership.</p> <p>Documentation of project activities/meetings/problems encountered.</p> <p>Participation in important meetings concerning the partnership.</p>
<p>To overcome institution issues involved in establishing a public/private partnership.</p>	<p>The public/private partners will overcome institutional barriers that have the potential to interfere with the provision of ATIS.</p>	<p>The partners worked together to meet the goals of the deployment.</p> <p>Institutional barriers were overcome in meeting these goals.</p>	<p>Documentation of key issues that came up during the partnership.</p> <p>Interviews with the partners concerning the public-private partnership.</p> <p>Deployment schedule and schedule exception report.</p>

**Table 2-2. Goals, Hypothesis, Evaluation Criteria, and Information Sources to Enhance the Understanding of the Invitation to Negotiate Procurement Method**

Objectives	Hypothesis	Evaluation Criteria	Information Sources or Requirements
To use the Invitation to Negotiate (ITN) to successfully procure an ITS project.	The ITN procurement method is an innovative way to procure ITS projects.	The project partners and managers are pleased with the outcomes of the ITN.  Deployment of the ATIS.	Interviews with the public agency staff who participated in the negotiation process.  Interviews with the private sector participants.  Documentation from FDOT on the procurement options available to them and on the ITN process, specifically.  Compare ITN procurement method with other unique procurement methods used at other sites.
To use the negotiation process to better refine the scope of services.	The negotiation process is helpful in refining the scope when a public agency is unsure of what it wants and what is available.	Public agencies are pleased with the final scope of services.	Interviews with the public partners.
To use the negotiation process to obtain the best possible arrangement with the private sector ISP for the traveling public and the public partners.	The negotiation process will allow the public agencies to get the “best” combination of services and revenue sharing through competitive bargaining.	The final scope of services and financial plan is perceived as optimal.	Interviews with the partners concerning the negotiation process.  Note changes in the different versions of the scopes of work.  Note changes in the financial plans made during the negotiations.

**Table 2-3. Goals, Hypothesis, Evaluation Criteria, and Information Sources to Examine the ATIS Business Model**

Objectives	Hypothesis	Evaluation Criteria	Information Sources or Requirements
To develop an ATIS business model that will likely lead to self-sustainability within the next 3 years.  To develop a successful ATIS.	The proposed business model will be successful and lead to increasing revenue generation.  The private sector will consider this ATIS service as a good investment and want to continue or expand the service.	Successful deployment of the ATIS.  The opinions of the public and private partners.	Interviews with the private and public partners.  Evaluations of other ATIS partnerships.

## **2.2 Evaluation Schedule**

A draft evaluation plan was presented to the FDOT project manager in late October 2000 for review. Two site visits to Miami were conducted in 2000 to tour the facilities and interview the project stakeholders. These interviews were used to obtain qualitative information from the stakeholders on the project and to develop the “before” scenario.

An interim evaluation report was presented to the PAWG in February 2001. The report included the evaluation plan and preliminary findings based on the stakeholder interviews.

A stakeholder survey was conducted in the fall of 2001. The results of the survey were used to develop a preliminary “after” scenario for the evaluation. A follow-up site visit was conducted in December 2001 to discuss the preliminary “after” scenario with stakeholders. The information obtained through the survey and the interviews were used to develop draft evaluation findings. A draft evaluation report was submitted to the stakeholders for review and comment in January 2002. In addition, the evaluation team presented the draft evaluation findings to the project stakeholders in late January 2002.

## **2.3 Data Sources**

Data collection was done through “before” and “after” stakeholder interviews and a stakeholder survey. Interview questions and the survey were developed following a review of project related documents (monthly progress reports, ITN materials) and discussions with the project manager.

### **3.0 Project Implementation**

SunGuide ATIS services were begun in April 2001. To date, the web-based service and the telephone service have been implemented. These are accessible at [www.smartraveler.com](http://www.smartraveler.com) and 305-914-3838 (Miami Dade County ) and 866-914-3838 (Broward and Pam Beach Counties). The e-mail service was deployed on March 8, 2002. The fax service and cable TV services have not yet been implemented, for reasons discussed below:

- Sending faxes appears to be redundant to providing e-mail services, and is not as efficient or as cost effective as an information dissemination service as is e-mail. However, the contract does not contain any process by which a service can be discontinued. The only option, apparently, is to negotiate an addendum to the contract. SRS has proposed that this service be implemented as a premium, for-fee service rather than as a free service as initially negotiated.
- The cable TV service proved to be unprofitable when implemented in SRS' Boston and Washington, DC markets. SRS has recommended against implementing an unprofitable service that has both high start-up costs and would compete with other SRS services.

The issues relating to the deployment of the cable TV system highlight what has become an impediment to the project: a contract document and scope of services that are not adequately drafted despite the use of the ITN. Both public and private partners stated that the document lacks clarity with respect to identifying what services will be provided and what services are “strongly encouraged” to be provided. The result of this is that the PARTNERS and SRS have differing interpretations of what is contractually required.



The quality of the services implemented appears to be timely (meeting the real-time criteria) and accurate, based on qualitative assessments provided by the PARTNERS. Data supporting this assessment were collected using a stakeholder survey and follow-up interviews. Several public partners stated that they had actually traveled on roadways and compared actual conditions with what was

being reported by SRS, with the end result that the SRS information was found to be timely and accurate. Both the public and private partners reported positive customer feedback with respect to the service.

An end-user customer satisfaction survey will be conducted as part of the project's annual review and evaluation. This survey will provide more detailed information on customer satisfaction, and is scheduled for completion during the summer of 2002. FDOT has indicated a copy of the final report based on survey results will be provided to FHWA if desired.

The PARTNERS have also negotiated an agreement with the South Florida Regional Transit Organization to use SRS and the SunGuide system to provide transit information. This will be done as an add-on task to the original contract, which did not require transit services information

to be provided. The RTO consists of Miami-Dade, Broward, and Palm Beach Counties and the Tri-County Commuter Rail Authority. These entities had intended to implement a Customer Information Network Service to provide users with information about service coverage, schedules, and other relevant transit information. A Joint Participation Agreement was finalized in December 2001 to implement this service by negotiating an addendum to the SRS contract. This represents a significant step towards achieving the goal of an intermodal ATIS.

### **3.1 Marketing and Outreach**

A substantial marketing and outreach effort has been implemented by SRS, with assistance provided by FDOT District VI. The effort began with advertising the availability of the service using FDOT’s DMS signs along Interstate 95 and the Golden Glades Interchange System. These signs posted the SunGuide telephone numbers as well as a recommendation to “Before you drive, call...”.

SRS has also posted SunGuide contact information on four static billboards in the service area, and aired television and radio spots between August 6 and November 1, 2001. In addition, 80,000 cards promoting SunGuide were distributed at tollbooths within the Miami-Dade tri-county region.

The impact of the marketing and outreach effort has been dramatic. Since the services have been implemented, telephone calls to SunGuide have substantially increased, as shown in Table 3-1. Web hits on the SunGuide website experienced a one-time surge due to media coverage announcing service implementation, but have been have maintained a relatively consistent number of hits in the succeeding months.

**Table 3-1. SunGuide Phone Call and Web Hit Information by Month in 2001**

<b>Month</b>	<b>Phone Calls</b>	<b>Web Hits</b>
April	N/A	6,326
May	438	35,367
June	1,233	12,162
July	2,235	10,943
August	2,567	17,4
September	7,974	13,901
October	5,599	14,419
November	15,928	15,485

### **3.2 Additional ITS Infrastructure Deployment and Data Collection**

SRS has undertaken a number of steps to enhance and expand data collection activities. SRS has deployed 20 of the 30 video cameras agreed to in the contract. It should be noted, however, that

the problems with the wording of the contract make it unclear as to whether or not SRS may deploy up to 30 cameras or shall deploy 30 cameras. SRS has also contracted for helicopter services to cover the service area during morning and evening rush hour periods. Finally, SRS is implementing a “Road Reporter” program, a program designed to encourage travelers to call SunGuide and report incidents, congestion, and any other traffic related information. Service coverage appears to be meeting contractual requirements, and as previously noted, the quality of service is good and is being well received by users. The PARTNERS have stated the information being provided is accurate, and user-calls received by SRS have provided positive feedback.

## 4.0 Evaluation Findings

This section of the evaluation report presents the findings derived from the stakeholder survey and interviews and the review of project related documents. The findings are presented by evaluation goal in the following format: A brief narrative of findings is presented, followed by a tabular comparison of the evaluation goals and objectives as proposed in the evaluation plan with the evaluation findings.

### **4.1 Goal #1: Understanding the Public-Private Partnership**

The public-private partnership established for the Miami Regional ATIS Project has been subject to a number of issues that have had a negative impact on the project and the partnership. These include:

- *Changes in Project Management.*

Both FDOT and SRS changed project managers within the first year of the project, leading to a lack of continuity in project management and direction. These changes also hampered the ability for PARTNERS to resolve implementation issues.

- *Purchase of SRS by Westwood One*

SRS has been purchased by Westwood One, a nation-wide provider of traffic information services. The change in ownership has resulted in a change in corporate philosophy. Westwood One is concerned about continued investment and participation in non-profitable business areas, and has recommended significant changes in the business model initially proposed for the Miami Regional ATIS Project, specifically regarding a proposal that the ATIS be a fee-for-service operation. These changes reflect the fact that private sector revenue sources needed to sustain the project have not developed, nor does there appear to be a viable market for ATIS services in the Miami Region at this time. This represents a significant philosophical change for the project.

- *Inadequate Specificity in Contractual Agreement*

Both the public and private partners agreed that the contractual agreement developed for the project is in need of improvement:

1. The contract contains somewhat vague language on what services are to be provided. For example, a number of project deliverables were described as “desired” or “recommended”. This had created significant misunderstandings between the public and private partners over what services were contractually agreed to, and what services are to be provided by SRS.
2. The contract does not contain a fixed schedule with clearly identified milestones covering when specific services are to be made available.

3. The contract does not include a clearly defined dispute resolution process. While all partners agreed that the Steering Committee established to provide project related oversight was the appropriate body for resolving disputes, how this process should work is not addressed in the contract.
4. More flexibility is needed in the contractual document to enable the ISP to respond to market conditions and discontinue or reduce unprofitable services. The contract does not contain a mechanism enabling the partners to revise or change service deliveries in response to changes in market conditions, and does not contain a clearly defined process on how decisions to change service deliveries should be agreed to and implemented.

Notwithstanding these issues, the public-private partnership has succeeded in implementing an ATIS service for South Florida that meets the needs of travelers and commuters. The new project managers at FDOT and SRS have made significant progress in addressing the problems resulting from the management changes, and have established frequent and effective channels of communication. The project managers communicate on a daily basis via telephone and also meet on a regular basis. The project has clearly benefited from this improved communication between the public and private partner managers. FDOT has indicated that a public-private partnership model for future ITS projects and deployments remains a service delivery option. Most importantly, FDOT has indicated that future partnerships will incorporate the lessons learned from the Miami Regional ATIS Project.

A comparison of evaluation goal #1 and actual project implementation experience is included in Table 4-1. The intent of this comparison is to show how project implementation experience achieved or did not achieve the evaluation goal, and why this result occurred. A similar comparison is presented for the other two evaluation goals.

**Table 4-1. Comparison of Evaluation Goal #1 Enhance the understanding of the process to develop and maintain a public/private partnership and SunGuide Implementation Experience**

Goal #1	Miami Regional ATIS Project (SunGuide) Implementation Experience
To use the public/private partnering method to provide an ATIS service in a timely and cost-effective manner that will benefit travelers and the agencies involved.	The project has succeeded in meeting this goal. The quality of traveler information being provided by SRS is accurate and timely, per the PARTNERS, and is providing a benefit to both end users and stakeholders.
To overcome institution issues involved in establishing a public/private partnership.	<p>The changes in project management have helped both public and private partners make great strides in overcoming and resolving institutional issues involved with operations.</p> <p>The issues related to the inadequate specificity contained in the contract document have not yet been resolved.</p>

**4.2 Goal #2: Understanding the Procurement Process**

The Invitation to Negotiate (ITN) procurement process has clearly worked well from the public sector perspective. FDOT was able to negotiate concessions from each vendor that increased the services to be provided through the project, with the result that the final scope of services included an amalgam of services that incorporated offerings from each proposal received. SRS has indicated that a number of concessions requested by FDOT had a negative impact on the business model, but FDOT has noted that any vendor negotiating under an ITN has the option to withdraw from negotiations.

The one major issue, the problems with interpreting the required contract services, is something that can be addressed in a straightforward manner. This has been noted both by FDOT and SRS. Both stated that the problems encountered with the current contract can be avoided in a future situation through better documentation of negotiations, including a detailed description of project deliverables, setting a schedule with identified milestones, and establishing a process for addressing changes in the project.

FDOT is considering the use of the ITN process for future ITS projects, in particular along Interstate 4 in the Orlando region, a major tourist area. FDOT has recognized, however, that relying on a single vendor and a limited number of public sector agencies does not adequately spread potential risk and financial obligation among the partners. Future use of the ITN process will be based on a business model that expands the number of public and private partners, and

includes both direct and indirect beneficiaries. For example, if the ITN process is used along the Interstate 4 corridor to provide ATIS, the tourism and hotel industries would be asked to participate. These industries represent potential indirect beneficiaries from the project, as greater ease of access on the part of tourists will make the Orlando area a more attractive destination.

A comparison of evaluation goal #2 and actual project implementation experience is included in Table 4-2.

**Table 4-2. Comparison of Evaluation Goal #2 Enhance the understanding of using the Invitation to Negotiate (ITN) process in choosing the Information Service Provider (ISP) and SunGuide Implementation Experience**

Goal #2	Miami Regional ATIS Project (SunGuide) Implementation Experience
To use the Invitation to Negotiate (ITN) to successfully procure an ITS project	This goal has been achieved. The success of this approach is reflected by the fact that FDOT plans on using this process for future ITS procurements.
To use the negotiation process to better refine the scope of services	This goal has been achieved. The final scope of services negotiated for the project includes proposed service delivery systems incorporated from each of the bids received.
To use the negotiation process to obtain the best possible arrangement with the private sector ISP for the traveling public and the public partners	Public sector perspective - goal achieved. ISP selected for the project had not proposed cable television services. However, the two unsuccessful bidders had proposed this service, and FDOT negotiated this service into the final scope of service agreement. The ISP, however, has indicated that certain concessions made negatively impacted on the business model.

### **4.3 Goal #3: Understanding the Business Model**

The business model proposed by SRS for the Miami Regional ATIS Project, a self-sustaining ATIS, is clearly not attainable. SRS has indicated that developing the ATIS as a self-sustaining business area is not feasible, and has proposed that the service be continued on a fee-for-service basis. The reasons for this are consistent with those of other ATIS projects that have attempted to develop a self-sustaining business:<sup>2</sup>

- *Internet-based Advertising*

A cornerstone of the business model proposed by SRS was the development of Internet based advertising. The market for Internet-based advertising has never developed as anticipated, and

<sup>2</sup> See Schuman, Rick and Sherer, Eli. “ATIS U.S. Business Models Review”, pp. 7 – 12, US DOT, ITS JPO, Washington, DC (November 2001).

this fact coupled with the collapse of the .com market in the past two years in essence eliminated this particular source of revenues.

- *Development of Value Added Services*

FDOT and SRS both anticipated the development of value-added and customized information services as an additional revenue source for the project. This is reflected by the language in which the ISP is encouraged to provide revenue-generating customized information to clients and generate commercial revenues. However, to date SRS has not offered value added services to clients. The market for such services has not developed as anticipated.

FDOT and SRS also recognized that marketing and outreach would be required to establish the SunGuide system as a brand name that travelers and commuters would recognize. The importance of this is reflected in the identification of specific marketing and outreach services to be provided by the ISP in the project's negotiated scope of work. While these activities have resulted in a concurrent increase in user contact to the SunGuide system, this increased contact has not been for value-added services. Most contacts have been to obtain travel information or to report incidents and congestion and have not expressed interest in obtaining value-added services.

An additional constraint is that the further development of value-added services will require an additional investment of resources in advertising. Experience in other markets has shown that such an investment can be cost-prohibitive (an example is the TravTIPS project implemented as a public-private partnership by the I-95 Corridor Coalition and ARINC, Inc., of Annapolis, MD. A study conducted for ARINC by Andersen Consulting estimated that approximately \$40 million in marketing and outreach would be required to establish the TravTIPS system as a brand name).<sup>3</sup> The potential return on investment needed to justify such a resource outlay does not appear to be attainable at present in the Miami tri-county region.

A comparison of evaluation goal #3 and actual project implementation experience is included in Table 4-3.

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<sup>3</sup>See "I-95 Corridor Coalition: Evaluation of the Advanced Traveler Information System Field Operational Test (TravTIPS)", p.2. US DOT, ITS JPO, Washington, DC (December 2001).

**Table 4-3. Comparison of Evaluation Goal #3 Examine the ATIS business model and SunGuide Implementation Experience**

<b>Goal #3:</b>	<b>Miami Regional ATIS Project (SunGuide) Implementation Experience</b>
<p>To develop an ATIS business model that will likely lead to self-sustainability within the next three years.</p>	<p>This goal will in all likelihood not be met. SRS has already indicated that achieving this goal is not probable. SRS has further indicated that the company will not continue to provide ATIS services beyond the five-year contract period using the current business model. SRS has already proposed a shift to a fee-for-service business model.</p>
<p>To develop a successful ATIS</p>	<p>From a technical viewpoint, the project has been successful. The SunGuide system is an operational system that is being used by travelers and commuters.</p> <p>From a business viewpoint, the project has not been successful. The project has demonstrated that providing self-sufficient ATIS services is problematic. The market for customized information services does not appear strong, and Internet based advertising as a source of has not developed as anticipated.</p>

## **5.0 Comparative Analysis of Evaluation Findings**

### **5.1 SunGuide and Choosing the Route**

The document “Choosing the Route to Traveler Information Systems Deployment: Decision Making Factors for Creating Public/Private Business Plans”<sup>4</sup> presents an excellent discussion of the issues related to ATIS deployments and establishing working public-private partnerships. The document also presents a model approach for these types of projects.

The evaluation team has found that comparing the model approach described in the document and actual implementation experience is a useful way to present evaluation conclusions. Documenting how closely actual experience meets the model deployment will enable other jurisdictions to identify and plan for the lessons learned, that is, identify what to do and what not to do, what works well and what doesn’t work well, potential issues to plan for, and how best to design and implement a project.

This comparative analysis is included in Tables 5-1 through 5-3. For each table, Column 1 presents the recommended model approach, and Column 2 presents the SunGuide implementation experience and contrasts this experience with the model approach.

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<sup>4</sup>Washington State Transportation Center, “Choosing the Route to Traveler Information Systems Deployment: Decision Factors for Creating Public/Private Business Plans,” ITS America, Inc., in association with the U.S. Department of Transportation (1998).

**Table 5-1. “Choosing the Route” and SunGuide – Public Private Partnerships**

<b>“Choosing the Route to Traveler Information Systems” Model Approach</b>	<b>SunGuide Implementation Experience</b>
<p>Clearly define the function of the ATIS, including clearly defining “core tasks” of the ATIS, and determining whom is responsible for ensuring that these tasks are implemented.</p> <p>The partnership should be designed to accommodate changes in the market, with an ability to add and subtract partners and services.</p> <p>Short-term, fee-for-service revenue streams are unlikely; some public subsidy will be required to support ATIS information structure.</p> <p>Public agency activities are geared toward traffic management with a corridor-based approach. The private sector requires a larger market with broader sources of information. These differences need to be addressed to make ATIS attractive for private sector investment.</p>	<p>The partnership established for the SunGuide project was guided by a contractual agreement that both sides agree is inadequate and vague in terms of what services are to be provided.</p> <p>Other jurisdictions considering a public-private partnership should take care that all agreements are clear, include mutually agreed to schedules and milestones, and specify what the project deliverables.</p> <p>Both partners felt that the SunGuide model was weak in this regard. The scope of services for the project includes language actively encouraging the ISP to develop revenue sources from the sale of advertising and customized information. A process was established for accommodating changes in the market. When a particular service proved unprofitable (cable TV), no process existed for changing the scope of services to be provided by the ISP.</p> <p>FDOT provided seed funding for the project with the expectation that the private partner would need time to develop revenue streams. FDOT, and other public stakeholders, also shared infrastructure access and data with the ISP.</p> <p>The contract agreement established a framework for the private partner to establish non-traffic management business areas and revenue sources other than public funding.</p>

**Table 5-2. “Choosing the Route” and SunGuide – Procurement Process**

<b>“Choosing the Route to Traveler Information Systems” Model Approach</b>	<b>SunGuide Implementation Experience</b>
<p>Private sector – profit-oriented Public sector – service-oriented</p> <p>The partnership needs to recognize these differences and understand what is important to each participant, and create a mechanism for resolving these differences. Open channels of communication also need to be established.</p>	<p>FDOT specifically elected the ITN process so that these differences could be accommodated. The ITN was structured so that FDOT and the other public partners would obtain the needed ATIS service while the private partner would be able to develop other business areas and achieve self-sufficiency.</p>

**Table 5-3. “Choosing the Route” and SunGuide – Business Model**

<p><b>“Choosing the Route to Traveler Information Systems” Model Approach</b></p>	<p><b>SunGuide Implementation Experience</b></p>
<p>Initial planning should focus on public sector agencies that control information infrastructures. Once this role has been clarified and public sector agencies have determined how to treat the private sector agencies, private sector can make business decisions related to entering the market.</p> <p>Business planning should be an iterative process and requires strong support from the public sector.</p>	<p>The partners have successfully established a working relationship that enables the sharing of data and information. The problem with the business model has been with developing other business areas and revenue sources that will support the core ATIS function.</p> <p>The contract document does not contain a process for deleting or revising services that are not profitable. Adding additional services does not appear to be a problem; addressing issues related to unprofitable performance has been a source of disagreement between the partners. The project would seem to be better served by an agreement that enabled revisions of the business plan using this iterative approach.</p>

**5.2 SunGuide and 511 Guidelines Version 1.0**

As part of the evaluation exercise, a comparison was conducted with the information currently being made available through SunGuide and the Basic Content Guidelines Version 1.0 being developed for 511 services. The intent of this comparison was to provide “real world” feedback on the guidelines. The 511 Guidelines were not available to SunGuide at the time of system development and implementation, so this comparison offers the opportunity to compare the guidelines with a system that was on-line and operating at the time the guidelines were developed.

On March 8, 1999, the U.S. Department of Transportation (USDOT) petitioned the Federal Communications Commission (FCC) to designate a nationwide 3-digit telephone number for traveler information. On July 21, 2000, the FCC designated 511 as the national traveler information number.

The American Association of State Highway and Transportation Officials (AASHTO), in conjunction with many other organizations including the American Public Transit Association (APTA) and the Intelligent Transportation Society of America (ITS America), with support from the U.S. Department of Transportation, has established a 511 Deployment Coalition. The goal of the 511 Deployment Coalition is “the timely establishment of a national 511 traveler information service that is sustainable and provides value to users.”



The intent is to implement 511 nationally using a bottom up approach facilitated by information sharing and a cooperative dialogue through the national associations represented on the Policy Committee, the governing body of

the program. The mission of the Policy Committee is to provide guidance on how to achieve this goal. To reduce the chances of service confusion and inconsistency, the 511 Deployment Coalition is establishing guidelines in the areas of content and consistency.

***...511 service consistency will be established through implementers following these guidelines, and as an increasing number of services were established, a national 511 service would emerge.<sup>5</sup>***

The Guidelines being developed are intended to define the basic content that should be included in 511 services. Two general categories have been identified for basic 511 content: highway information, information associated with certain roadways within a 511 area; and public transportation, information associated with transit services.

For highway content, the Guidelines propose general principles that should be used in developing guidelines and content specific recommendations for guidelines. The recommended principles include:

- Provide information (content) that is route/corridor based.
- Limited access roadways and the National Highway System should be the basis for basic 511 highway/roadway content.
- Urban areas (given higher traffic volumes and congestion levels) require more detail than rural areas.
- Content should be automated, enabling callers to retrieve information without contacting human operators.

The SunGuide system has incorporated each of the proposed principles contained in the 511 Guidelines.

The guidelines established recommend that telephone access be done through a menu tree that could be navigated through a phone's keypad or by voice command. Additional recommendations include:

- Information on all National Highway System (NHS) facilities/corridors should be available to callers; in urban areas, information on non-NHS limited access highways should also be available.
- In non-urban areas, long routes should be subdivided into segments. Segment specification is left to the implementer.
- Content type should include: construction/maintenance projects; road closures and major delays; major special events; and weather and road surface conditions.

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<sup>5</sup>Adapted from the 511 Guidelines, Version 1.0.

- For each content type, the following content detail should be provided:
  1. **Location.** The specific location or portion of route segment where a reported item is occurring, related to mileposts and/or interchange(s).
  2. **Direction of Travel.** The direction of travel on the route segment a reported item is occurring.
  3. **General Description and Impact.** A brief account and impact on travel of the reported item.
  4. **Days/Hours and/or Duration.** The period in which the reported item is “active” and possibly affecting travel.
  5. **Detours/Restrictions/Routing Advice.** As appropriate, summaries of required detours, suggested alternate routes or modes and travel restrictions associated with a reported item.
  6. **General Forecasted Weather and Road Surface Conditions.** Near-term forecasted weather and pavement conditions along the route segment.

Table 5-4 correlates content type and content detail for each of the recommended guidelines and the SunGuide system. The marked boxes show the content type and detail currently provided by the SunGuide system, and contrasts well the proposed 511 Guidelines with an actual deployment.

**Table 5-4. Basic Content Detail and Content Type for SunGuide**

Content Type: 511 Guidelines, Version 1.0	Geography		Content Detail					
	Urban	Rural	Location	Direction of Travel	General Description and Impact	Days/Hours and/or Duration	Detours/Restrictions/Routing Advice	General forecasted Weather and Road Surface Conditions
Construction Maintenance	?	?	?	?	?	?	?	
Road Closures/Major Delays	?	?	?	?	?	?	?	
Major Special Events	?	?	?	?	?	?	?	
Weather and Road Conditions								
Incidents/Accidents (Minor)		?	?	?	?			
Congestion Information		?	?	?	?			

The 511 Guidelines have also established principles and guidelines for transit information. The basic principles include:

- Information on all transit agencies in a 511-service area should be accessible.
- 511 should work in conjunction with existing transit customer service centers accessible by telephone.
- 511 systems should attempt to minimize overload on transit customer service centers.
- Each agency providing information is responsible for insuring the accuracy of their information.

The guidelines on content for transit information include:

- Provide a brief description of the agency's services.
- Provide information on major service disruptions, changes, or additions.
- Where appropriate, an option to be transferred to the agency's customer service center should be included.
- The service should broadcast other information that the transit operator wishes to provide callers (special fare and pass information, agency Internet address, etc).

Although the transit information component of SunGuide has not yet been implemented, the proposed service will incorporate all of the principles and guidelines discussed above. The planning for the transit information component was done independently from and without the benefit of the proposed 511 Guidelines. This again demonstrates the consistency between the proposed 511 Guidelines and an existing system.

In an increasingly advanced information society, callers are generally accustomed to high quality information, and 511 content must be no different. Specifically, 511 implementers must focus on the following quality parameters:

- **Accuracy.** Reports must contain information that matches actual conditions. If the system reports service disruptions that are not occurring (or worse, does not report a service disruption), callers will come to distrust the information provided. If inaccuracies persist, callers will discontinue their use of 511.
- **Timeliness.** Closely related to accuracy, information provided by 511 must be up-to-date. While it is recognized that smaller agencies will have more difficulty inserting and updating information quickly, every attempt must be made by both large and small agencies to update information as soon as there is a known deviation from the current report.
- **Reliability.** Methods must be developed to provide callers with a reliable stream of information 24 hours a day, 7 days a week. Also, the inherent reliability of the 511 system needs to minimize the amount of time callers will be unable to obtain a report along a route segment due to equipment or process failures.

The SunGuide system meets these quality parameters based on reports provided by SRS and comments received from the PARTNERS.

Based on this assessment, the proposed guidelines being developed to support 511-deployments match well with the existing SunGuide system. This consistency indicates that the guidelines accurately reflect not only what is needed in terms of information content and type to make 511 useful to the end user, but that the resulting guidelines reflect capabilities and services that are feasible to develop and deploy. The guidelines also appear to offer the flexibility a system implementer will need to adapt a proposed service to meet local conditions and needs and still provide the basic information recommended for a 511 system.

## 6.0 Conclusions and Recommendations

The Miami Regional ATIS Project was a well-planned, well-conceived project that attempted to address many of the issues that earlier public-private partnership projects had faced including:

- The use of the ITN procurement process to provide needed flexibility and establish a framework for the private partner to develop additional business areas and revenue sources.
- Clearly defining how the existing FDOT ITS infrastructure and data would be made available to the ISP and how the ISP would be able to use this data for revenue generating purposes.

The one major shortcoming or constraint identified by the public and private partners, the lack of specificity in the contractual agreement, is an issue that can be remedied for future projects. Although it is not clear how issues created by this will be resolved for the Miami Regional ATIS Project, the partners are communicating and attempting to find a solution.

The project, however, appears to have encountered the same problem that similar efforts have experienced elsewhere in the country: ATIS does not appear to be a business area capable of generating a self-sustaining stream of revenues. While the quality of services being provided by SRS is good, and the ATIS is meeting traveler and user needs, the business model proposed for the project does not appear viable.

The previously referenced document “ATIS US Business Models Review” concludes that:

- Revenue generation from ATIS services, both wholesale and to the individual, has not proven successfully that this revenue can wholly support an ATIS service.
- If there are specific traveler information services public agencies in a region or state wish to provide to their traveling public, they should be prepared to underwrite most or all of the cost.<sup>6</sup>

These two findings both appear to be relevant for the Miami Regional ATIS project. The long-term sustainability of the SunGuide system does not appear to have been resolved, and it appears that the development of an alternative(s) business model or approach will be necessary once the current contract for services has been completed.

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<sup>6</sup> Op. Cit., page 12.

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